

DESCRIPTION OF *DACTYLOKEPON SULCIPES* N. SP.
(CRUSTACEA: ISOPODA: BOPYRIDAE) AND
NOTES ON *D. CARIBAEUS*

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Abstract.—*Dactylokepon sulcipes*, n. sp. is described from material collected in the eastern Gulf of Mexico on the leucosiid crab, *Callidactylus asper* Stimpson. *Dactylokepon sulcipes* is most similar to *D. caribaeus*. The female of *D. sulcipes* differs from that of *D. caribaeus* by 1) having different ornamentation of the internal ridge of the first oostegite; 2) having a posterolateral point on the first oostegite; 3) having a groove on the external (ventral) surface of the fifth oostegite, and 4) having shorter endopods on the pleopods. The male of *D. sulcipes* has midventral tubercles on the pereon and pleon; the male of *D. caribaeus* lacks these tubercles.

Among the crabs collected by Dr. Thomas S. Hopkins from the eastern Gulf of Mexico were four *Callidactylus asper* Stimpson, 1871, having prominent branchial swellings indicating infestation by a bopyrid isopod. These crabs and their bopyrids were given to the author for study. The bopyrids were first thought to be *Dactylokepon caribaeus* Markham, 1975. Upon examination of the types at the Smithsonian Institution, it became apparent that the bopyrid from *C. asper* represented an undescribed species.

The description of *D. caribaeus* is supplemented with a few observations that aid in distinguishing these two bopyrids.

Dactylokepon caribaeus Markham, 1975

Fig. 1

Daktylokepon (sic) *caribaeus* Markham, 1975:61.

Dactylokepon caribaeus Markham, 1975:61-66, figs. 4-6.

Material examined.—Infesting *Iliacantha subglobosa* Stimpson, 1871. Off-shore southeast coast of Dominican Republic; *Pillsbury* station P-1387; 18°21'N, 69°09'W; 130-165 m; 9 July 1971; 1 ♀ (paratype) USNM 143657, 1 ♂ (allotype) USNM 143656. Same general locality; *Pillsbury* station P-1395; 18°21'N, 69°12'W; 166 m; 10 July 1971; 1 ♀ (holotype) USNM 143654, 1 ♂ (paratype) USNM 143655.

Description.—Only points differing from or not mentioned by Markham (1975) are given.

Female: (Fig. 1). Few tubercles present on pereomeres 1-4, particularly tergal area. Dorsal bosses with lateral margins crenulate. Coxal plates present on all pereomeres, greatly reduced on posterior pereomeres. Oostegite 5 without ridge and groove proximally. Pleopods with endopods nearly length of exopod, ratio of endopod to exopod not decreasing posteriorly.

Male: as described by Markham (1975).

Distribution.—Known from the Caribbean Sea off the southeastern coast of

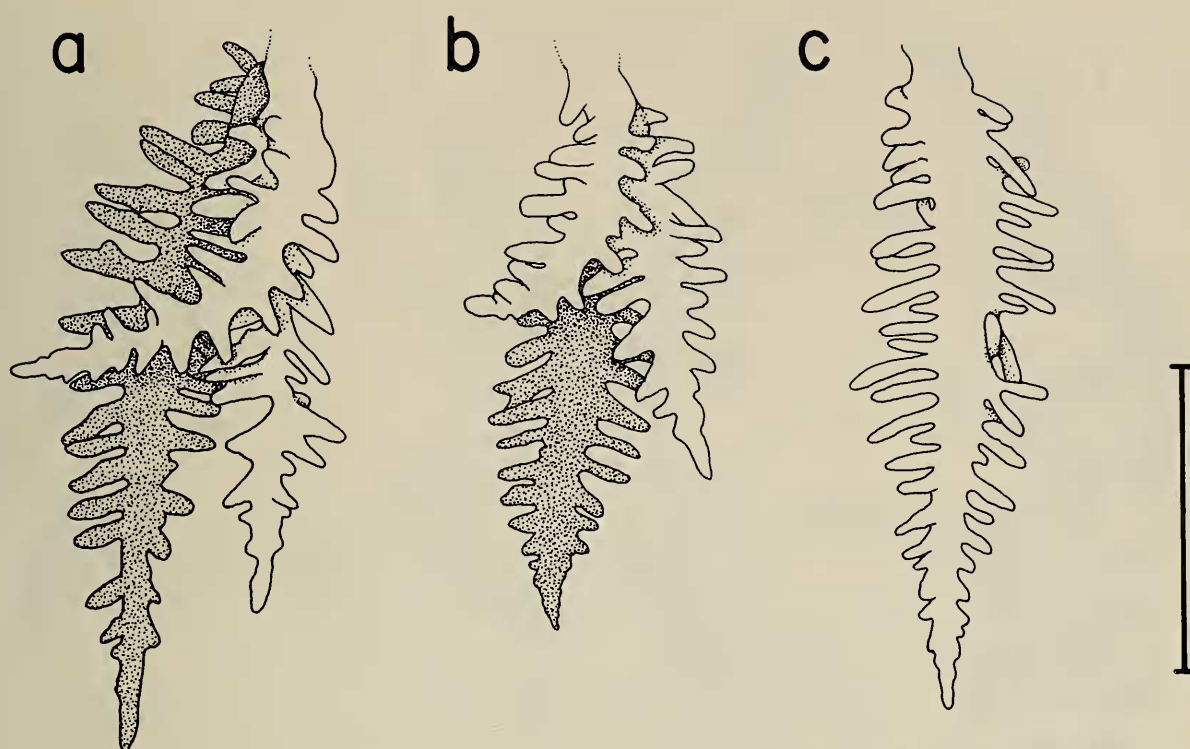


Fig. 1. *Dactylokepon caribaeus*, female, holotype: a, Left lateral plate and pleopod 4; b, Left lateral plate and pleopod 5; c, Left uropod. Lateral plates stippled. Scale = 1.0 mm.

the Dominican Republic (type-locality), and off the Costa Rica-Panama border, from the type-series only.

Dactylokepon sulcipes, new species

Figs. 2–5

Material examined.—Infesting *Callidactylus asper* Stimpson. Eastern Gulf of Mexico. MAFLA station III-G (141); 30°01'30"N, 85°54'54"W; diver-collected; 30 m; 6 June 1974; T. S. Hopkins collector; D. L. Adkison determined host; 1 ♀ (gravid, holotype) USNM 172444, 1 ♂ (paratype) USNM 172445, host present; 2 ♀ (gravid), 2 ♂ USNM 172446 host present. BLM station 44-330701-1; 28°29'N, 84°20'W; capetown dredge; 42 m; 13 July 1976; T. S. Hopkins collector; D. L. Adkison determined host; 1 ♀ (non-gravid, no ♂) USNM 172447 host present. SAM station 337-2; 30°07'N, 86°45'W; trawl; 35 m; March 1977; R. L. Shipp collector; D. L. Adkison determined host; 1 ♀ (juvenile), 1 ♂ USNM 172448 host present.

Description.—Female (Figs. 2–4): Length 4.6–5.7 mm; width across pereomeres 3 or 4, 2.1–2.9 mm. Distortion angle less than 10°.

Head: frontal lamina prominent, anterior border scalloped, with a few protuberances on dorsal surface. Eyes small, at posterior margin of frontal lamina and lateral edge of cephalogaster, visible in lateral view. Antenna 1 of 3 segments; basal segment with 2 setae; second segment, with 5 setae (juvenile with 5 setae); distal segment, 9 setae as terminal tuft (juvenile with 5 setae in tuft). Antenna 2 of 4 segments; basal segment lacking setae; second segment, with 5 setae (juvenile with 3 setae); third segment with 5 setae (juvenile with 4 setae); distal segment

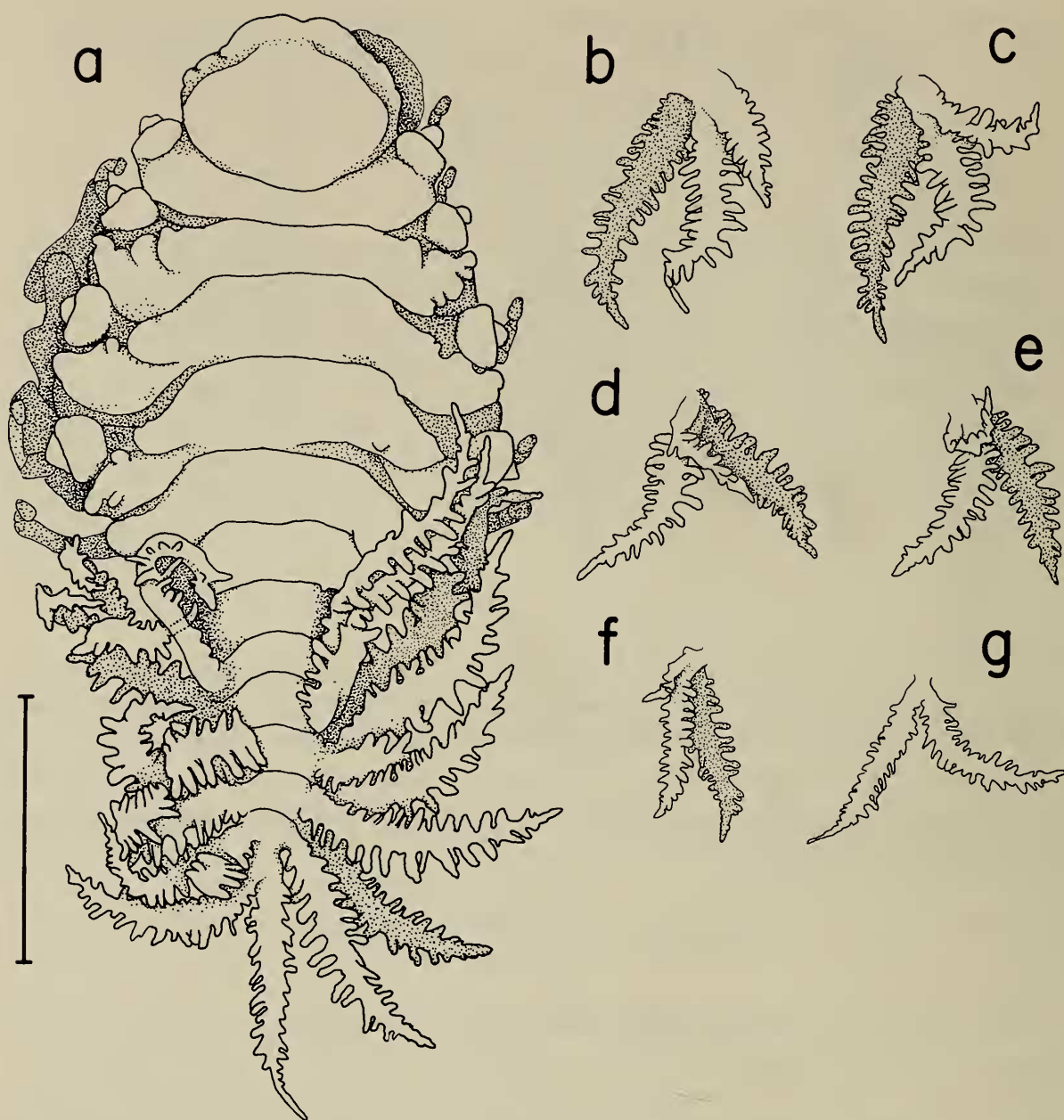


Fig. 2. *Dactylokepon sulcipes*, female, holotype: a, Dorsal view; b, Right lateral plate and pleopod 1; c, Right lateral plate and pleopod 2; d, Right lateral plate and pleopod 3; e, Right lateral plate and pleopod 4; f, Right lateral plate and pleopod 5; g, Uropods. Lateral plates stippled. Scale = 2.0 mm for fig. a.

with 5–7 setae (juvenile with 5 setae). Maxilliped rectangular, palp covered with spines on medial and anterior borders. Posterior lamina with 2 pairs of projections; median pair of projections, small medially covered hook; lateral pair of projections, either simple or multilobed, larger than median pair.

Pereon: pereopods increasing in length posteriorly. Dorsal bosses present on pereomeres 1–4; coxal plates present on all pereomeres; tergal area greatly developed on pereomeres 2–4, with tubercles present on tergal area and along suture line between tergal area and dorsal bosses; a few tubercles present on dorsal bosses. Tubercles on lateral margin of pereomere 7 appear to interdigitate with setae on posterior edge of oostegite 5. Exterior surface of oostegite 5 with pos-

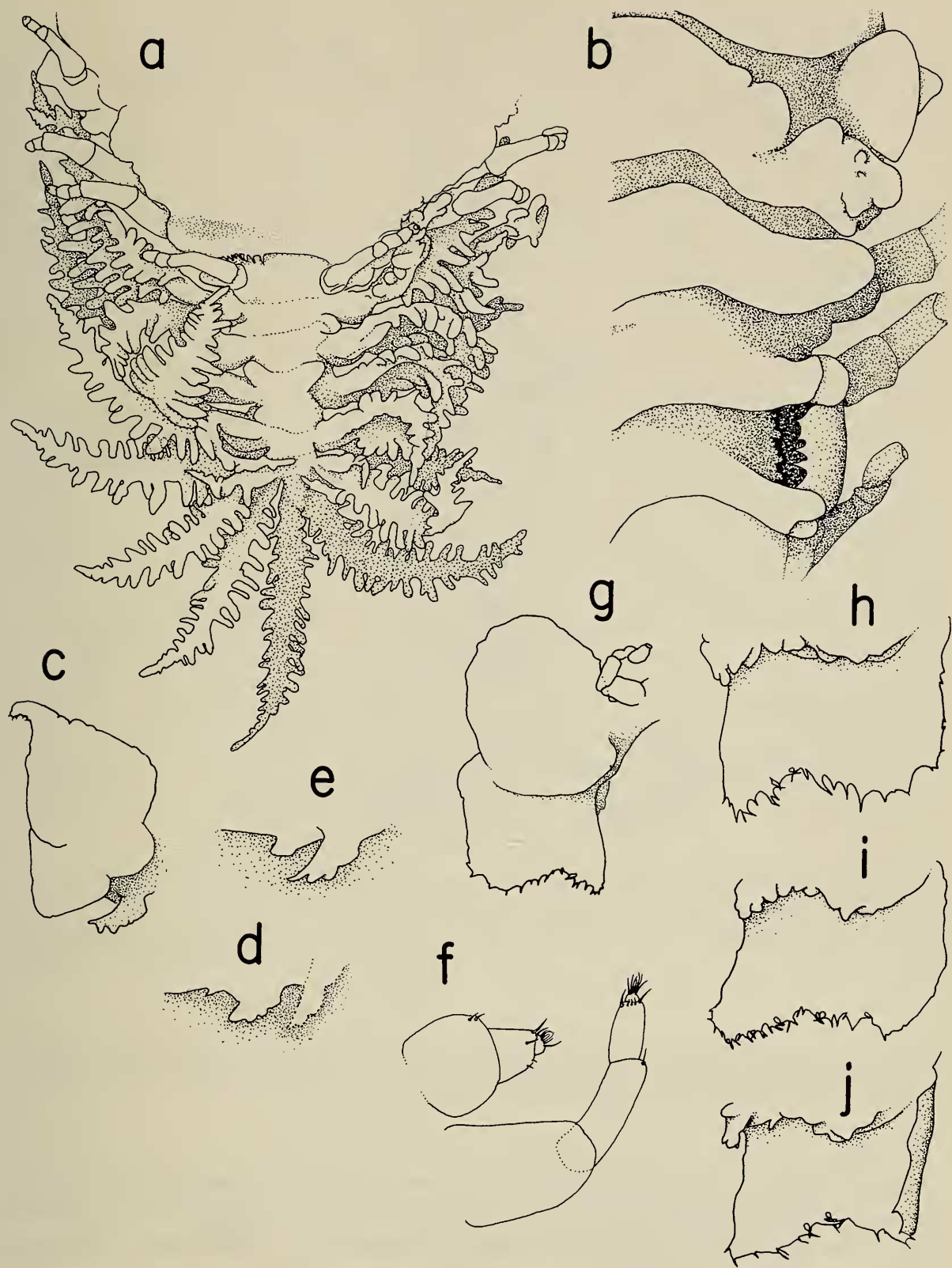


Fig. 3. *Dactylokepon sulcipes*, female: a, Pleon, ventral view showing trough for pereopod 7 in oostegite 5, right side; b, Dorsal view of pereomeres 4-7; c, Maxilliped with spur; d, Posterior lamina (spur shown in c removed); e, Posterior lamina; f, Antennae; g, Oostegite 1 and pereopod 1, exterior view; h, Internal ridge of g; i, Internal ridge; j, Internal ridge. Figures from holotype, a-d, g, and h. Figures from paratype female USNM 172447, f and i. Figure from USNM 172446, e.

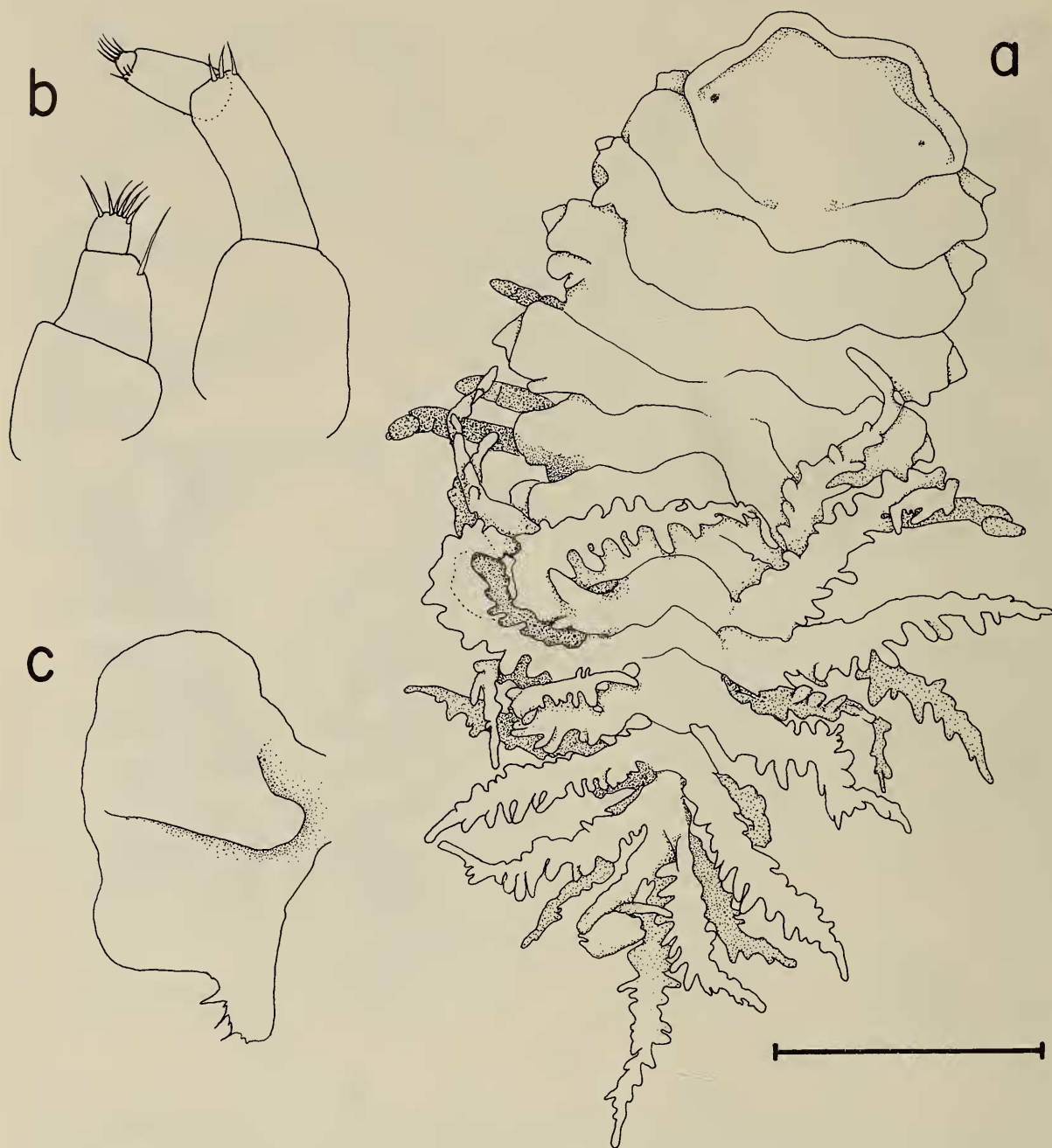


Fig. 4. *Dactylokepon sulcipes*, immature female, USNM 172448: a, Dorsal view; b, Left antennae; c, Left oostegite 1, exterior view. Scale = 1.0 mm for fig. a.

terolateral area with crenulate ridge arising at posterior edge and continuing anteriorly to near base of pereopod 6; second smaller ridge of protuberances present anterior to larger ridge. Oostegite 1 anteriorly rounded with irregular edge; internal ridge digitate, one digitate lobe visible in dorsal view; posterior plate with posterior edge digitate, posterolateral point present.

Pleon: six segments narrowing posteriorly. Lateral plates long, digitate, decreasing in length posteriorly. Pleopods 5 biramous, pairs decreasing in length posteriorly; exopod subequal in length to lateral plate. Endopod of pleopod 1 nearly $\frac{1}{2}$ length of exopod, ratio of endopod to exopod decreasing posteriorly until pleopod 5, when endopod $\frac{1}{4}$ length of exopod. Uropod digitate, uniramous, nearly as long as lateral plate on pleomere 1.

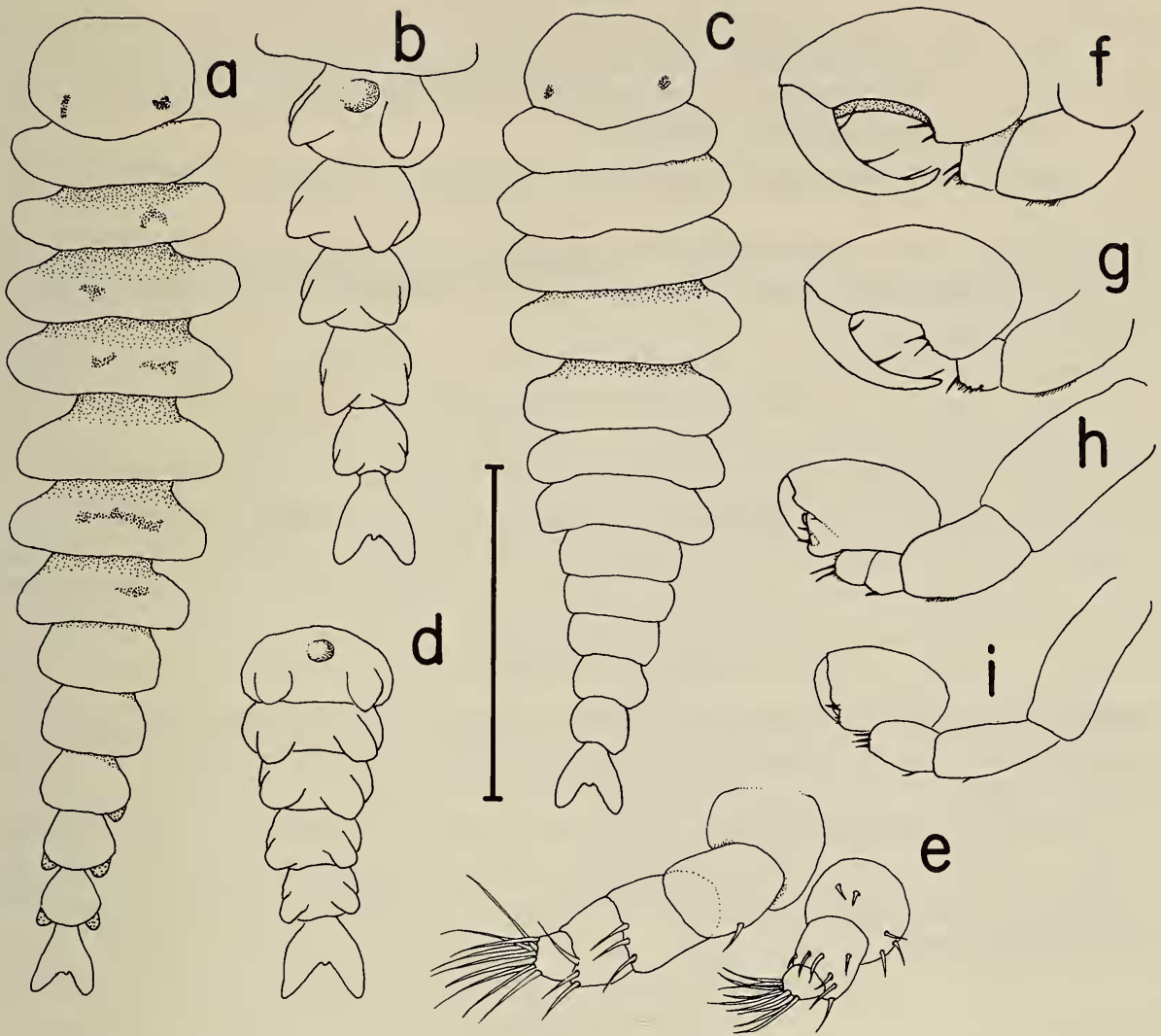


Fig. 5. *Dactylokepon sulcipes*, male: a, Dorsal view, elongate form; b, Pleon of a, ventral view; c, Dorsal view, compact form; d, Pleon of c, ventral view; e, Left antennae; f, Pereopod 1; g, Pereopod 2; h, Pereopod 4; i, Pereopod 7. Figures from USNM 172445, a, b, and e-i. Figures from USNM 172446, c and d. Scale = 1.0 mm for figs. a and c.

Male: (Fig. 5). Two forms found, first form elongate (Fig. 5a), other form compact (Fig. 5c). Length 1.2–2.4 mm; width across pereomere 2 or 3, 0.50–0.56 mm.

Head: narrower than pereomere 1. Eyes present at posterolateral margin. First antenna of 3 segments; basal segment with 6 subapical setae; second segment with 9 setae in subapical ring; distal segment, 8–11 setae as terminal tuft. Second antenna of 5 segments; basal segment, lacking setae; second segment with 1 seta; third segment with 3 apical setae; fourth segment with 3–5 apical setae; distal segment with 10–13 setae as terminal tuft. Maxillipeds not seen.

Pereon: of seven segments; pereomere 1 width greater than width of pereomeres 6 or 7, pereomere 7 narrowest. Pigment spots generally present on dorsal surface of pereomeres. Legs decreasing in length posteriorly, pereopods 1 and 2 with dactyli and propodi enlarged, other pereopods normal. Midventral tubercles present on all pereomeres.

Pleon: of six segments; pleomere 1 distinctly narrower than pereomere 7. Mid-

ventral tubercle present on pleomere 1, often present on pleomere 2. Pleopods uniramous, tuberculate, 5 pairs decreasing in size posteriorly. Uropods absent. Pleomere 6 Y-shaped, setae present on both posterior and lateral borders; anal cone present though generally indistinct.

Distribution.—Known only from the type-series collected in the eastern Gulf of Mexico.

Etymology.—The specific name from Latin is a combination of *sulcus* (groove) + *pes* (foot) alluding to the groove in the fifth oostegite into which the seventh pereopod appears to fit.

Discussion.—*Dactylokepon sulcipes* is most similar to *D. caribaeus*. Both species are found on members of the Leucosiidae, *D. caribaeus* is found on *Iliacantha subglobosa* and *I. liodactyla*, while *D. sulcipes* is found on *Callidactylus asper*. The female of *D. caribaeus* differs from the female of *D. sulcipes* in that the first oostegite has different ornamentation on the internal ridge, there is no posterior lateral point, the pereon has fewer tubercles, oostegite 5 is without ridges, and the endopods of pleopods are longer. The lack of midventral tubercles on the pereon and pleon differentiates the male of *D. caribaeus* from *D. sulcipes*.

The two forms of males found are thought to be artifacts of fixation. The elongate form differs from the compact form by the medial separation of its pereomeres; in the compact form the pereomeres are in contact except for the lateral margin.

Of the five parasitized *Callidactylus asper*, one was a male, two were mature females, and two were immature females. Four female bopyrids were found in the left branchial chamber of the host while one female was found in the right branchial chamber.

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Literature Cited

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